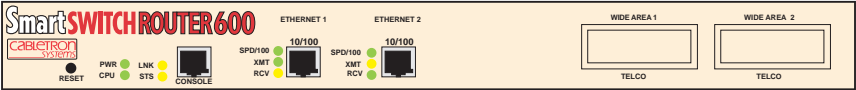


SSR-600 Installation Guide



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Order Number: 9033032-01 October 1999

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73/23/EEC

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Conformance to Directive(s)/Product Standards: EC Directive 89/336/EEC
EC Directive 73/23/EEC
EN 55022
EN 50082-1
EN 60950

Equipment Type/Environment: Networking Equipment, for use in a
Commercial or Light Industrial
Environment.

We the undersigned, hereby declare, under our sole responsibility, that the equipment packaged with this notice conforms to the above directives.

Manufacturer	Legal Representative in Europe
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Full Name	Full Name
Compliance Engineering Manager	Managing Director - E.M.E.A.
Title	Title
Rochester, NH, USA	Newbury, Berkshire, England
Location	Location

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INTRODUCTION



Only qualified personnel should perform installation procedures.

Welcome to the Cabletron Systems *SSR-600 Installation Guide*. SSR stands for SmartSwitch Router. This guide provides installation, basic configuration information, hardware specifications and troubleshooting tips for the SSR-600.



Since most of the information in this manual applies to either model regardless of the power supply, the generic term SSR-600 will be used. If there is specific information concerning the different models, either SSR-600-S or SSR-600-D will be used as appropriate.

USING THIS GUIDE

Read through this guide completely to familiarize yourself with its content and to gain an understanding of the features and capabilities of the SSR-600. A general working knowledge of WAN, Ethernet and IEEE 802.3 data communications networks and their physical layer components is helpful before using the SSR-600.

STRUCTURE OF THIS GUIDE

This guide is organized as follows:

This **Introduction** provides preliminary information that will aid in using this manual, lists technology and user's guides that may help the user to set up and manage the SSR-600, and provides instructions on how to get help from Cabletron Systems.

Chapter 1, Overview of the SSR-600, provides an overview of the SSR-600 and its features.

Chapter 2, Network Requirements, outlines the network requirements that must be met before installing the SSR-600 into a network.

Chapter 3, *Installation*, provides detailed instructions for connecting the SSR-600 to a network.

Chapter 4, *Troubleshooting, Switches, and LED Indications*, provides detailed troubleshooting tips using the LANVIEW LEDs on the SSR-600, along with hardware information.

Appendix A, *Specifications*, contains information on functionality and operating specifications, regulatory compliance, connector pinouts, environmental requirements, and physical properties.

SSR-600 FEATURES

The SSR-600 is an access device that provides Ethernet Local Area Network (LAN) connectivity via two Fast Ethernet ports, and offers high-speed Wide Area Network (WAN) access to remote sites via two Sliding WAN Physical Interface Modules (SWPIMs).

Refer to the appropriate Cabletron Systems software manual for information on supported WAN protocols and how to configure the SSR-600 using software.

The SSR-600 can be remotely managed with a third party SNMP compliant network management system.

OPTIONAL FEATURES

Optional features for the SSR-600 include:

- **Rack mounting:** The SSR-600 can be installed in a 19-inch rack with the optional mounting bracket kit (Cabletron part number SSR-600-RCK-KIT). Refer to **Chapter 3, *Installation***, for rack mounting instructions.
- **SSR-600-ECM auxiliary card.** Performs encryption and compression.
- **SWPIMs:** Supports Sliding WAN Physical Interface Modules (SWPIMs), including the SWPIM-T1, the SWPIM-E1, and the SWPIM-SY. Check the Release Notes for further information on available SWPIMs.

RELATED MANUALS

The following manuals may help the user to set up and manage the SSR-600:

Cabletron Systems *Ethernet Technology Guide*

Cabletron Systems *Cabling Guide*

The manuals referenced above can be obtained on the World Wide Web in Adobe Acrobat Portable Document Format (PDF) at the following site:

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Cabletron Systems applicable software manuals for the SSR-600 and the HSIM-SSR-600 host platforms (Cabletron Routing Software Manuals):

Bridging Configuration Guide

Event Logging System Message Guide

Network Interface Operations Guide

Routing Protocols Reference Guide

Routing Protocols User's Guide

System Software Guide

ClearVISN Routing Configurator User's Guide

Systems Network Architecture Guide

Quick Reference Guide

DTF (Data Trace Facility) User Guide

Use the applicable Cabletron Systems SWPIM document to connect to the WAN using the SWPIM installed in the SSR-600.

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Note symbol. Calls the reader's attention to any item of information that may be of special importance.



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Caution symbol. Contains information essential to avoid damage to the equipment.



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- Your Cabletron Systems service contract number
- A description of the failure
- A description of any action(s) already taken to resolve the problem (e.g., changing mode switches, rebooting the unit, etc.)
- The serial and revision numbers of all involved Cabletron Systems products in the network
- A description of your network environment (layout, cable type, etc.)
- Network load and frame size at the time of trouble (if known)
- The device history (i.e., have you returned the device before, is this a recurring problem, etc.)
- Any previous Return Material Authorization (RMA) numbers

CHAPTER 1

OVERVIEW OF THE SSR-600

The SSR-600 (Figure 1-1) is a device that provides Ethernet Local Area Network (LAN) connectivity via two fixed Ethernet ports, and offers high-speed Wide Area Network (WAN) access to remote sites via two optional Sliding WAN Physical Interface Modules (SWPIMs).

The SSR-600 operates from a standard ac power source.

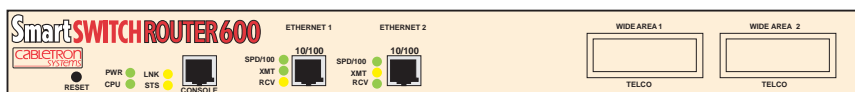


Figure 1-1 SSR-600

1.1 SSR-600 HARDWARE

This section details the hardware capabilities of the SSR-600.

1.1.1 WAN Connection

The WAN connections to the SSR-600 are provided by the optional SWPIMs. The SSR-600 supports certain WAN protocols depending on the SWPIM installed. Refer to the appropriate SWPIM manual for detailed information on the SWPIMs chosen for installation.

- The SWPIM-T1 provides a T1 interface through a front panel RJ45 port and includes a built-in Channel Service Unit/Digital Service Unit (CSU/DSU) for direct connection to a T1 line. The SWPIM-T1 provides both Full T1 or Fractional T1 using 56 or 64 Kbps Time Slots, with a total throughput of up to 1.544 Mbps (1.536 payload bandwidth).
- The SWPIM-SY provides a synchronous serial connection of up to 2.048 Mbps to external communications equipment (e.g., a multiplexer or CSU/DSU). The SWPIM-SY uses a subminiature 36-pin connector that supports these electrical signal interfaces: EIA-RS449, V.35, EIA-RS232D, X.21, EIA-RS530, EIA-530A.

- The SWPIM-DDS provides a 56 Kbps or 64 Kbps Digital Data Service (DDS) connection. The SWPIM-DDS supports remote CSU diagnostic or 64 Kbps clear channel loopback and non-latching remote DSU diagnostic loopback.
- The SWPIM-E1 provides an E1 interface through a front panel RJ45 port and includes a built-in CSU/DSU for direct connection to an E1 line. The SWPIM-E1 provides both Full E1 or Fractional E1 using 56 or 64 Kbps Time Slots with a total throughput of up to 2.048 Mbps (1.984 Mbps payload bandwidth).
- The SWPIM-BRI provides an Integrated Services Digital Network (ISDN) 64 or 128 Kbps Basic Rate Interface (BRI) for the SSR-600, and supports both the S/T-interface and the U-interface. The SWPIM-BRI can be used for Dial-up access. The SWPIM-BRI can also provide an ISDN back-up link for a remote site or branch office when the main SWPIM for a frame relay or leased line loses a connection or becomes disabled. An NT-1 adapter is necessary for this interface in the United States.

1.1.2 Ethernet LAN Connection

The SSR-600 provides 10/100 Mbps Ethernet/IEEE 802.3 support through two fixed front panel Fast Ethernet ports.

1.1.3 FLASH EEPROMs

The SSR-600 uses a FLASH Electrically Erasable Programmable Read-Only Memory (EEPROM) that allows new firmware to be downloaded using BootP or TFTP protocols.

1.1.4 LANVIEW LEDs

Cabletron Systems LANVIEW Status Monitoring and Diagnostics System is a troubleshooting tool that helps in diagnosing power failures, collisions, cable faults, and link problems. The LANVIEW LEDs are located on the SSR-600 front panel.

1.1.5 RESET Button

The front panel RESET button reboots the SSR-600 and initializes the processor. The RESET button is also used with the mode switches to clear NVRAM.

1.1.6 Console Port

The console port of the SSR-600 is used to access software management by a direct connection to the SSR-600. Command Line Interface (CLI) is used to communicate with the SSR-600. Refer to [Appendix A](#) for the pinouts of the console cable. Use the applicable Cabletron Systems software manuals for further information on the management of the SSR-600. Refer to [Related Manuals](#) in the [Introduction](#).

1.2 REMOTE MANAGEMENT

The SSR-600 can be remotely managed with any third party SNMP compliant network management packages.

1.3 OPTIONAL FEATURES

Rack Mounting Capabilities - The SSR-600 can be installed in a 19-inch rack with the optional mounting brackets and screws (Cabletron part number SSR-600-RCK-KIT). Refer to [Chapter 3](#) for complete rack mounting instructions.

SSR-600-ECM Auxiliary Card - Designed to authenticate, encrypt, generate public keys and/or compress data packets stored in the host platform's shared memory, the SSR-600-ECM will also decrypt and expand packets that have been encrypted and compressed.

This optional hardware data compression/encryption module accelerates data compression for the SSR-600 over Nailed-up PPP, or ISDN and Frame Relay with PPP riding underneath them. Depending on the packet type and size, hardware data compression provides data compression for enhanced throughput on each T-1 SWPIM interface. To use the hardware data compression module, compatible equipment such as another SSR-600, or other vendors equipment which conforms to the applicable standards, must be in use at both ends of the WAN link. When the hardware data compression module is installed on the board, it automatically assumes the compression task from software. There is no configuration necessary to prioritize hardware over software compression.

SWPIMs - The SWPIMs are the interface for the WAN connections for the SSR-600. Available as listed in the Release Notes. Refer to [Section 1.1.1](#) for details.

CHAPTER 2

NETWORK REQUIREMENTS

Before installing the SSR-600, review the requirements and specifications referred to in this chapter concerning the following:

- 10BASE-T Twisted Pair Network (Section 2.1)
- 100BASE-TX Twisted Pair Network (Section 2.2)

The network installation must meet the guidelines in this chapter and in the documents referenced in this chapter to ensure satisfactory performance of the equipment. Failure to follow the guidelines may produce poor network performance. These guidelines are specifically for the fixed twisted pair front panel ports only, Ethernet 1 and Ethernet 2. For the different SWPIMs that can be installed in the SWPIM slots, refer to the applicable installation guide for the specific SWPIM.



The Cabletron Systems *Cabling Guide*, referred to in the following sections, can be found on the Cabletron Systems World Wide Web site: <http://www.cabletron.com/>

2.1 10BASE-T NETWORK

When connecting a 10BASE-T segment to either of the SSR-600 ports, ensure that the network meets the Ethernet network requirements of the IEEE 802.3 standard for 10BASE-T. Refer to the Cabletron Systems *Cabling Guide* for details.



If a port is to operate at 100 Mbps, Category 5 cabling must be used. For 10 Mbps operation only, Category 3 cabling can be used. Refer to Section 2.2 for information about 100BASE-TX networks and cabling.

2.2 100BASE-TX NETWORK

The two fixed front panel ports of the SSR-600 provide an RJ45 connection that supports Category 5 UTP cabling. The device at the other end of the twisted pair segment must meet IEEE 802.3u 100BASE-TX Fast Ethernet network requirements for the devices to operate at 100 Mbps. Refer to the Cabletron Systems *Cabling Guide* for details.



The fixed ports of the SSR-600 support Category 5 UTP cabling with an impedance between 85 and 111 ohms for 10 and 100 Mbps operation.

The SSR-600 is capable of operating at either 10 or 100 Mbps. The SSR-600 automatically senses the speed of the other device and adjusts its speed accordingly.

2.3 WAN NETWORK REQUIREMENTS

Each SWPIM has to meet its own cabling and network requirements to be properly connected to the WAN. Please refer to the appropriate SWPIM user's guide for requirements.

CHAPTER 3

INSTALLATION

This chapter outlines the procedure for setting up the SSR-600 and attaching it to the network. Ensure that the network meets the guidelines and requirements outlined in [Chapter 2](#) before installing the SSR-600. Sections of this installation procedure may require the following items:

- Antistatic wrist strap (provided with the SSR-600)
- Phillips screwdriver

3.1 GUIDELINES FOR INSTALLATION



Only qualified personnel should perform installation procedures.



Do not connect SWPIM ports to the network before they are configured. The WAN connection can be cut off by the phone company if the SWPIM is not configured properly, or is connected before being configured.

Installation sites must be within reach of the network cabling and meet the requirements listed below:

- A properly grounded power receptacle must be within seven feet of the location. If using the SSR-600-D, two power receptacles on two different circuits are recommended for redundancy. One receptacle is sufficient for the SSR-600-S.
- In a shelf installation, the shelf must be able to support 13.8 kg (30.4 lb) of static weight for each device on the shelf.
- Maintain a temperature of between 5°C (41°F) and 40°C (104°F) at the installation site with fluctuations of less than 10°C (50°F) per hour.
- Maintain a two-inch clearance for each side and the back of the device for adequate ventilation.

3.2 UNPACKING THE SSR-600

Unpack the SSR-600 as follows:

1. Remove the shipping material from the box and carefully remove the SSR-600.
2. Visually inspect the SSR-600. If there are any signs of damage, contact Cabletron Systems (refer to the [Getting Help](#) section) immediately.
3. Read any SSR-600 Release Notes included in the shipping box for any important up-to-date information before proceeding.

3.3 INSTALLING OPTIONS

If you have purchased the SSR-600-ECM auxiliary card, it must be installed before proceeding. The cover of the SSR-600 must be removed to install this option. The SSR-600 cover does not need to be removed to install the SWPIMs.

The Cabletron Systems Sliding WAN Physical Interface Modules (SWPIMs) can be installed before or after the SSR-600-ECM installation. Refer to [Section 3.3.3](#).



The SWPIM and SSR-600-ECM options are sensitive to static discharges. Use a grounding strap and observe all static precautions during installation. Failure to do so could result in damage to the SWPIMs, SSR-600-ECM, or the SSR-600.

3.3.1 Removing the SSR-600 Cover

This section describes how to remove the SSR-600 chassis cover. The cover must be removed to install an SSR-600-ECM or to change switch positions when necessary.



Do not remove the cover from the SSR-600 while power is applied to the unit. Do not power up the device again until the cover and screws are back in place.

To remove the chassis cover, proceed as follows:

1. Disconnect the SSR-600 from the network as follows (if applicable):
 - a. Unplug the power cord(s) from the rear of the SSR-600 chassis.



Before performing **step b**, mark any cables connected to the SSR-600 according to their associated port numbers. This is recommended for ease of reinstallation.

- b. Disconnect any network cables attached to the SSR-600.
2. Use a Phillips screwdriver to remove the four screws that attach the chassis cover to the unit. (See **Figure 3-1**).
3. While facing the back of the unit, remove the chassis cover by pulling the cover toward you, then up and off the chassis.

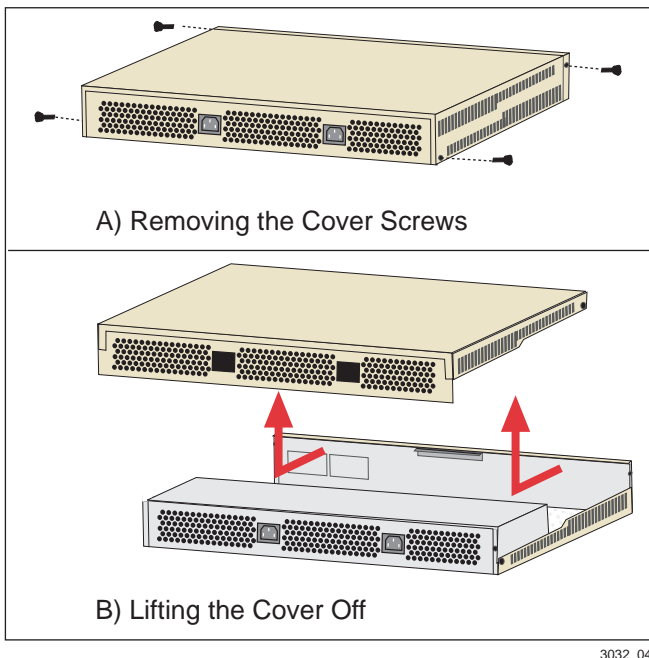


Figure 3-1 Removing the Chassis Cover

3.3.2 Optional SSR-600-ECM Installation



Failure to follow the procedures in the indicated documentation can result in damage to either the installed option or the SSR-600.

Figure 3-2 details the board layout of the SSR-600 to show where the SSR-600-ECM can be installed. To install an SSR-600-ECM to enhance the performance of your SSR-600, refer to the instructions enclosed with the SSR-600-ECM.

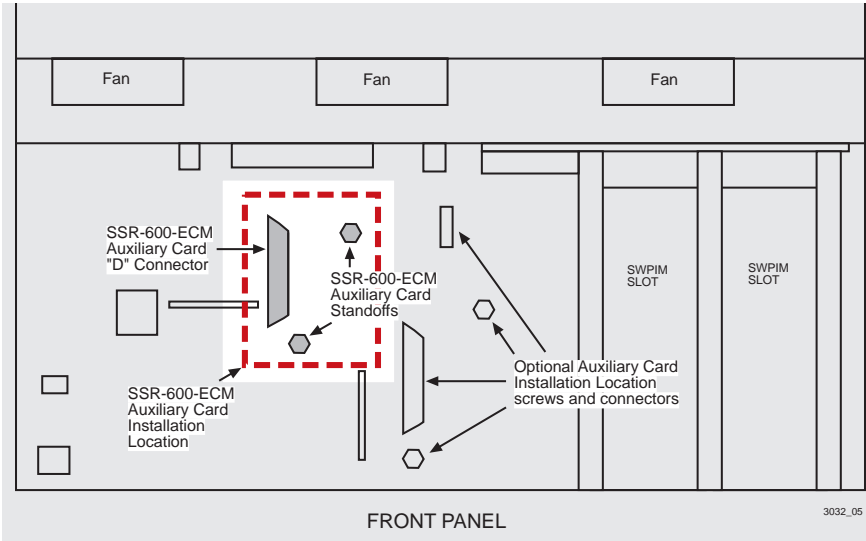


Figure 3-2 Option Placement

3.3.3 Installing Sliding WAN Physical Interface Modules

The SSR-600 is capable of having up to two Sliding WAN Physical Interface Modules (SWPIMs) installed into its chassis. [Figure 3-3](#) indicates the ports in the SSR-600 into which the SWPIMs can be installed.



Failure to follow the procedures for installation in the indicated documentation can result in damage to either the installed option or the SSR-600.

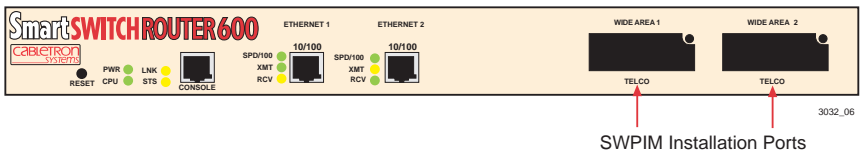


Figure 3-3 WAN SWPIM Ports

Refer to the applicable SWPIM Installation Guide for information on how to safely install an SWPIM in the SSR-600 to enhance the capabilities of your SSR-600. After installing your SWPIM, refer to the applicable software guide for information on how to configure the SWPIM to connect it to the WAN. Refer to the [Related Manuals](#) section in the [Introduction](#).

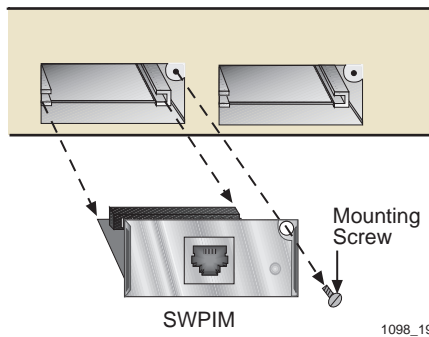


Figure 3-4 Removing an Existing SWPIM

3.4 INSTALLING THE SSR-600

The SSR-600 may be installed on a tabletop, shelf or in a 19-inch rack.

Refer to [Section 3.4.1](#) for information concerning a tabletop or shelf installation. [Section 3.4.2](#) describes the rackmount installation.

3.4.1 Tabletop and Shelf Installations



Before performing installation procedures, ensure that the requirements outlined in [Section 3.1, Guidelines for Installation](#), are met.

To install the SSR-600 on a tabletop or shelf, locate the SSR-600 within seven feet of its power source with an unrestricted free surface area as shown in [Figure 3-5](#), and complete the following steps:

1. Locate the four rubber feet included with your SSR-600.
2. Peel the paper backing off the rubber feet, and adhere them to the bottom of the SSR-600. Place one rubber foot near each of the four corners of the SSR-600.

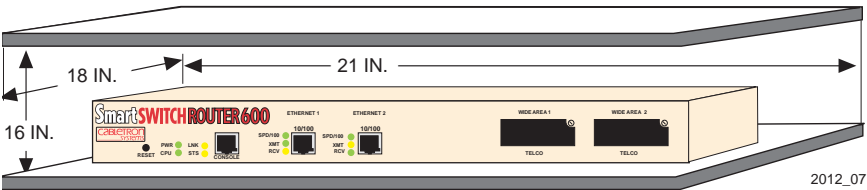


Figure 3-5 Tabletop or Shelf Installation

Continue the installation by connecting power as described in [Section 3.5](#).

3.4.2 SSR-600 Rackmount Installation

The optional rackmount kit, part number SSR-600-RCK-KIT, is used to install the SSR-600 in a standard 19-inch rack.



Before installing the SSR-600 into a rack, ensure that the rack supports the device without compromising the stability of the rack. Otherwise, personal injury and/or equipment damage may result.

Rackmounting the SSR-600 requires the following steps:

- Attaching the rackmount brackets to the SSR-600
- Installing the SSR-600 in a 19-inch rack

3.4.2.1 Tools Required

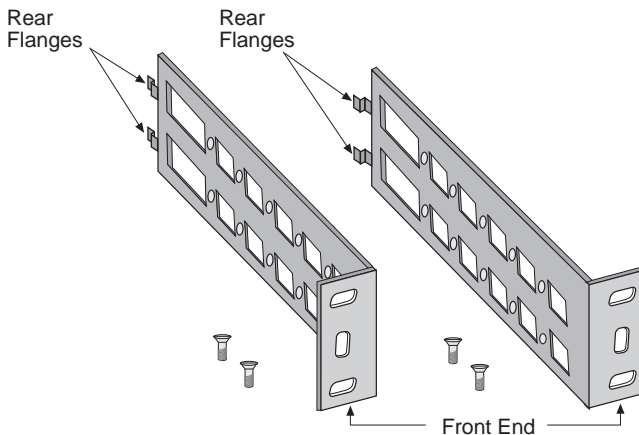
- Phillips screwdriver
- Flat blade screwdriver

3.4.2.2 Materials Required

1. The following parts are included in the SSR-600 rackmount kit (see [Figure 3-6](#)):
 - rackmount brackets (2)
 - 6-32 x 1/4 inch flathead screws (4)



Do not use screws other than those supplied with the SSR-600 to perform the following procedures. The wrong size screws can cause electrical or physical damage to the device.



20121_12

Figure 3-6 SSR-600 Rackmount Hardware

3.4.2.3 Attaching the Rackmount Brackets

Proceed as follows to attach the rackmount brackets:

1. Locate the two rackmount brackets.
2. With the faceplate, or front of the SSR-600, towards you, align the front of the bracket with the front of the SSR-600. Locate the slots that align with the rear flanges of the bracket. See [Figure 3-7](#).
3. Swing the front of the bracket out and insert the flanges into the slots. If the front of the bracket does not line up with the front of the SSR-600 and the screw holes when you swing it in to the SSR-600, readjust the position until it does. See [Figure 3-7](#).

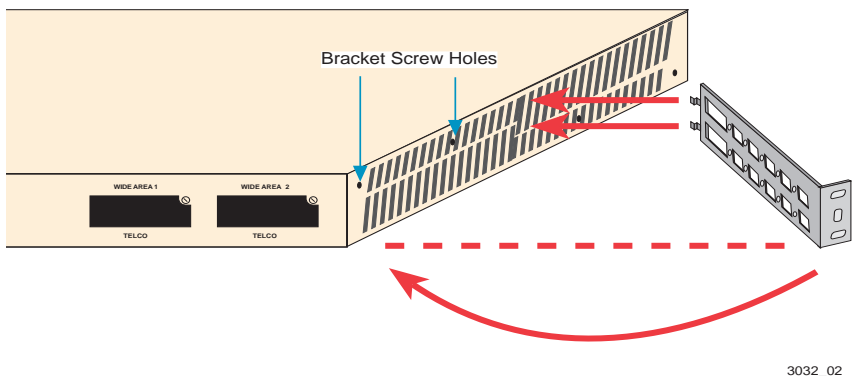


Figure 3-7 Aligning the Brackets for Installation

4. Use two of the four 6-32 x 1/4 inch flathead screws to attach the bracket along the top edge of the SSR-600. See [Figure 3-8](#).

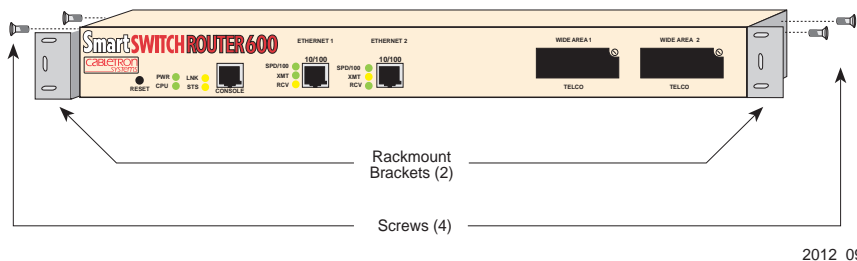


Figure 3-8 Installing the Rackmount Brackets

3.5 CONNECTING TO THE POWER SOURCE



The SSR-600 has universal power supplies. This allows you to connect the SSR-600 to power sources of 100–125 or 200–240 Vac, at 50 or 60 Hz. The voltage is automatically sensed when the power cord is plugged in.

To connect the SSR-600 to the power source, perform the following steps:

1. Plug the power cord into the back panel of the SSR-600.
2. Plug the other end of the power cord into a grounded wall outlet.



The SSR-600-D may use either one of the power supplies. When only one is plugged in, there is no redundancy. When both power supplies are plugged in, one is redundant, so that if the power supply in use fails, the other will supply power to the unit to keep it in operation. It is recommended that the power cords be plugged into two separate power lines in order to increase the redundancy factor.

The SSR-600-S has only one power cord for its single power supply, therefore needs only one power connection.

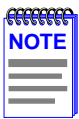
3. Verify that the **PWR** LED is either solid green or solid yellow, indicating that the SSR-600 is receiving power. After the SSR-600 runs a self test, the **CPU** LED goes solid green indicating normal operation. If the LED does not go solid green in a reasonable period of time, this indicates that the processor is faulty. Contact Cabletron Systems (refer to [Getting Help](#) in the [Introduction](#)).

3.6 CONNECTING TO THE NETWORK

This section provides the procedures for connecting the Ethernet ports of the SSR-600 to the network, and directions for information on connecting the WAN ports. For more information, refer to [Chapter 2](#).

3.6.1 Connecting to the Fast Ethernet Ports

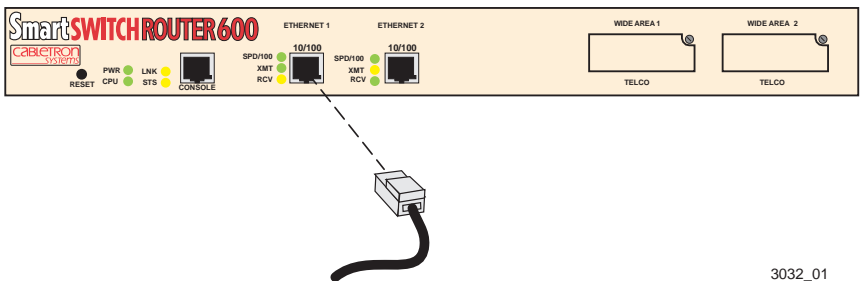
The two fixed front panel ports of the SSR-600 are 10/100 Fast Ethernet ports with internal crossovers. When connecting a workstation to the SSR-600, use a straight-through cable. When connecting other networking devices, such as a bridge, repeater, or router to the SSR-600, use a crossover cable.



The SSR-600's two Fast Ethernet front panel ports support Category 5 Unshielded Twisted Pair (UTP) cabling with an impedance between 85 and 111 ohms. Category 3 cable may be used if the connection is only going to be used for 10 Mbps.

Connect a twisted pair segment to one of the Fast Ethernet ports on the SSR-600 as follows:

1. Ensure that the device connected to the other end of the segment is powered ON.
2. Connect the twisted pair segment to the SSR-600 by inserting the RJ45 connector on the twisted pair segment into the desired RJ45 port as shown in [Figure 3-10](#). Do not connect a cable connected to an Ethernet port to the console port.



3032_01

Figure 3-10 Connecting a Twisted Pair Segment

3. Verify that a link exists by checking that the port **RCV** (Receive) LED is ON (flashing amber, blinking green, or solid green). If the **RCV** LED is OFF and the **XMT** (Transmit) LED is not blinking amber, perform the following steps:
 - a. Verify that the cabling being used is Category 5 UTP with an impedance between 85 and 111 ohms. If the port is to operate at 100 Mbps, category 5 cabling must be used.
 - b. Verify that the device at the other end of the twisted pair segment is on and properly connected to the segment.
 - c. Verify that the RJ45 connectors on the twisted pair segment have the proper pinouts ([Figure 3-11](#) and [Figure 3-12](#)) and check the cable for continuity. Typically, a crossover cable is used between a switching or hub device and an end user (computer). A straight-through cable is used between hub devices.

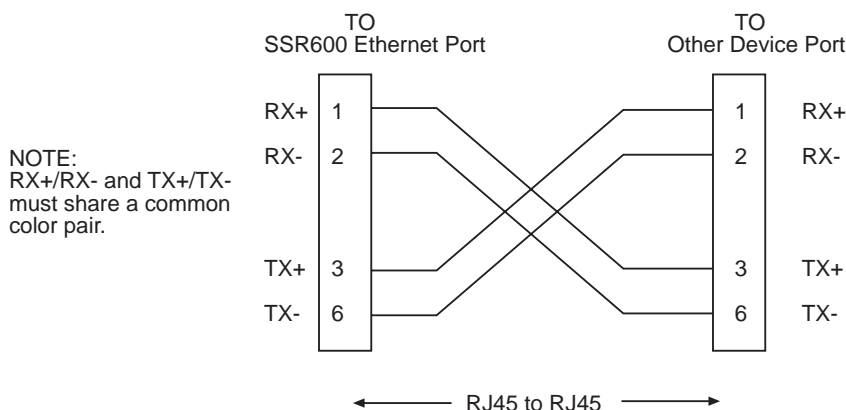


Figure 3-11 Crossover Cable RJ45 Pinouts

NOTE:
RX+/RX- and TX+/TX-
must share a common
color pair.

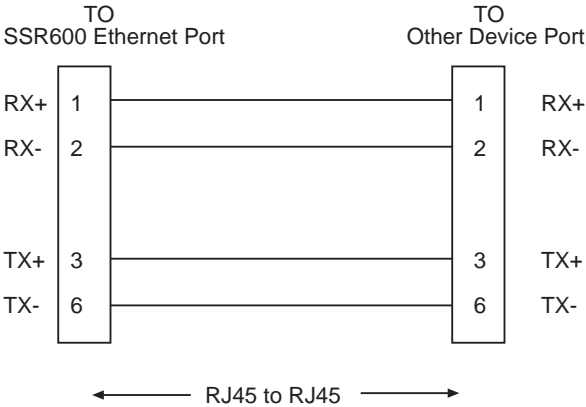


Figure 3-12 Straight-Through Cable RJ45 Pinouts

- d. Ensure that the twisted pair connection meets the dB loss and cable specifications outlined in the Cabletron Systems *Cabling Guide*. Refer to the **Introduction** for information on obtaining this document.

If a link can not be established, contact Cabletron Systems. Refer to **Getting Help**, in the **Introduction**, for details.

- 4. Repeat steps 1 through 3 above, for both connections, as needed.

3.6.2 Connecting SWPIMs to the WAN

Refer to the applicable Cabletron Systems SWPIM manual for information on connecting any SWPIMs to the WAN that you have installed into the SSR-600.



Do not connect any WAN cables without checking the guidelines and insuring that the software set-up in the SSR-600 is complete. The WAN connection can be shut off by the phone company if the SSR-600 is not set up properly.

3.7 SOFTWARE CONFIGURATION

Refer to the applicable Cabletron Systems software manual to configure the SSR-600. Refer to the **Related Manuals** list in the **Introduction**.

CHAPTER 4

TROUBLESHOOTING, SWITCHES, AND LED INDICATIONS

This chapter is used to aid in determining hardware indications of operation and problems, and switch settings.

Figure 4-1 shows the front panel LEDs for the SSR-600. Table 4-1, Table 4-2, and Table 4-3 describe LED states.

Table 4-4 describes switch positions.

If you are having difficulty installing and configuring the SSR-600, perform the following steps:

- Review Chapter 3 (Installation).
- Verify that power has been applied to the SSR-600.
- Check that all cables and connectors have been attached properly.

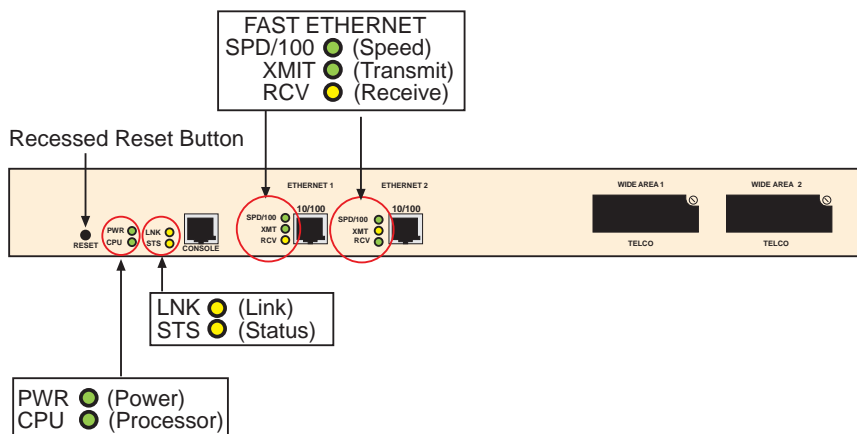


Figure 4-1 SSR-600 Front Panel LEDs

4.1 FRONT PANEL LED INDICATIONS

Table 4-1 SSR-600 Hardware LED States

LED	Color	State
Power (PWR)	OFF	None of the installed power supplies are operating, and the battery backup board is not operating (or not installed).
	SOLID GREEN	All installed power supplies are operational.
	SOLID YELLOW	One power supply is operational, and the other is not operating (this indication only applies when 2 power supplies are installed).
	BLINKING RED	None of the installed power supplies are operating, and the on-board battery back up is operational.
Processor (CPU)	OFF	Power off.
	SOLID GREEN	System is fully operational.
	BLINKING YELLOW	System not fully operational.
	SOLID YELLOW	Power-up testing being performed.
	BLINKING RED	Fault condition detected (fatal error).
	SOLID RED	System is in reset mode.

Table 4-2 Console Port LEDs

LED	Color	State
Link (LNK)	OFF	No modem or no data.
	SOLID GREEN	Modem attached, ready.
	FLASHING YELLOW	Modem attached, passing data.
		Console attached, passing data.
	SOLID RED	Modem attached, not ready.
Status (STS)	OFF	Port idle, no connection.
	BLINKING GREEN	Modem attached, carrier not detected.
	SOLID GREEN	Modem attached, carrier detected.
	BLINKING YELLOW	Port in test mode.
	SOLID YELLOW	Console attached.

Table 4-3 SSR-600 LAN LED States

LED	Color	State
Fast Ethernet Speed (SPD/100)	OFF	Speed is 10 Mbps.
	SOLID GREEN	Speed is 100 Mbps.
Transmit (XMT)	OFF	No Activity, port enabled.
	FLASHING GREEN	Activity, port enabled.
	BLINKING YELLOW	Port in standby.
	FLASHING RED	Fault or error (collision).
	SOLID RED	Diagnostic failure.
Receive (RCV)	OFF	No link. No activity. Port enabled or disabled.
	BLINKING GREEN	Link. Port disabled.
	SOLID GREEN	Link. No activity, port enabled.
	FLASHING YELLOW	Link, activity, port enabled.
	SOLID RED	Diagnostic failure.

4.2 SWITCHES

The SSR-600 has two switches on the main motherboard, a thermal switch and a switch bank.

Thermal Switch

The thermal switch will close if the temperature inside the device exceeds 65°C when the SSR-600 is operating. The thermal switch then notifies the processor that the temperature in the SSR-600 exceeded 65°C. This information can be used to send a trap and/or log a message.

Switch Bank

The four-position switch bank has the functions shown in [Table 4-4](#). The SSR-600 must be reset or powered down for the firmware to recognize the settings of the switches, and then implement any changes.

Table 4-4 Four Position Switch Bank Functions

Switch	Function
1	Force download
2	Restore defaults
3	Currently unused
4	Currently unused

The switch is used for the following functions:

- Force download is used when the user wants to force the SSR-600 to download a new image at bootup.
- Restore Defaults is used to return the SSR-600 to the factory configuration.

4.2.1 Switch Function Procedure

These steps must be followed to use the switch function:

1. Remove power to the SSR-600.
2. Remove the cover of the SSR-600. Refer to [Section 3.3.1](#).
3. Refer to [Table 4-4](#) for a description of the switch functions.
4. Locate the switch bank in [Figure 4-2](#). For the function you need, flip the appropriate switch from one side to the other side. The initial state of the switch does not matter.
5. Replace the cover.
6. Restore power to the SSR-600.

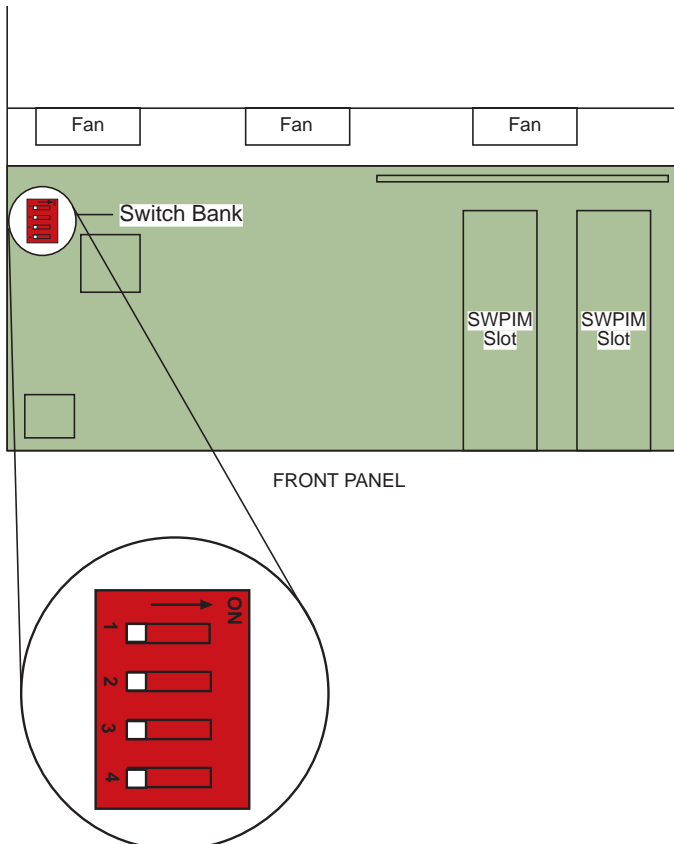


Figure 4-2 Switch Bank Layout

4.3 TROUBLESHOOTING SSR-600 HARDWARE

Power (PWR) LED is OFF

- Check the power source.
- Check that the power connections are firmly plugged in to the back panel of the SSR-600.

Processor (CPU) LED is OFF

The CPU stays OFF for an extended amount of time, and the power (PWR) light remains on. The CPU is in an unknown state.

- Contact Cabletron Systems (refer to [Getting Help](#) in the [Introduction](#)).

Processor (CPU) LED is blinking Red

The processor has detected a fault condition, or has failed boot up diagnostics.

- Contact Cabletron Systems (refer to [Getting Help](#) in the [Introduction](#)).

4.4 TROUBLESHOOTING THE LAN

Transmit LED is flashing Red

Collisions are normal in an Ethernet network, however, increased collisions may indicate that the network is out of specification.

Receive (RCV) LED is OFF

- Check that the SSR-600 and the device at the other end of the segment are powered up.
- Check that the port is enabled. Refer to the appropriate Cabletron Systems software manual to enable the port.
- Verify that the RJ45 connectors on the twisted pair segment have the correct pinouts.
- Check the cable for continuity.
- Check that the cable meets the specifications for dB loss.

APPENDIX A

SPECIFICATIONS

This section describes the environmental specifications and safety and approval requirements for the SSR-600. Cabletron Systems reserves the right to change these specifications at any time without notice.

A.1 PHYSICAL PROPERTIES

Dimensions:	4.45 H x 43.18 W x 39.37 D (cm) 1.75 H x 17.0 W x 15.5 D (in)
Weight (Unit):	6.3 kg (13.8 lb)
CPU	MPC860MH with 33 MHz clock
Flash Memory	8 Meg
MTBF (Predicted):	674,018 hours
	Universal power supply: 100-125 Vac, or 200-240 Vac at either 50 or 60 Hz
Power Requirements	Current draw: 1.6 A maximum with 100-125 Vac input 0.8 A maximum with 200-240 Vac input SSR-600-S: single power supply. SSR-600-D: dual power supply, redundant power supply capability.

A.1.1 Console Port

The RJ45 labeled “console” on the front panel of the SSR-600 is used to access the Command Line Interface (CLI). Refer to the appropriate software manual for details. See [Related Manuals](#) in the **Introduction**.

Table 1-1 Console Port Connector Pinout

Pin	Function
1	Transmit Data
2	Data Carrier Detect
3	Data Set Ready
4	Receive Data
5	Ground
6	Data Terminal Ready
7	Request to Send
8	Clear to Send

A.1.2 Fast Ethernet RJ45 Pinout

The two RJ45s labeled Ethernet 1 and Ethernet 2 have the following pinout:

Table 1-2 Fast Ethernet RJ45 Pinout

Pin	Function
1	Receive +
2	Receive -
3	Transmit +
4	Not used
5	Not used
6	Transmit -
7	Not used
8	Not used

A.2 ENVIRONMENTAL REQUIREMENTS

Operating Temperature:	+5° to +40°C (41° to 104°F)
Non-operating Temperature:	-30° to +90°C (-22° to 194°F)
Operating Humidity:	5% to 90% (non-condensing)

A.3 REGULATORY COMPLIANCE

Safety	UL 1950 (without D3 deviations), CSA C22.2 No. 950, and EN 60950
EMI	FCC Part 15 Class A, EN 55022 Class A and VCCI V-3
EMC	EN 50082-1 including: IEC 801-2 (ESD), IEC 801-3 (Radiated Susceptibility), and IEC 801-4 (EFT/B)
NEBS (Bellcore)	TR-NWT-000063: Network Equipment Building System (NEBS) Generic Equipment Requirements. GR-1089-CORE: EMC and Electrical Safety Generic Criteria for Network Telecommunications Equipment.

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